Amendments to the Claims

Please cancel claims 486-488 and 495 without prejudice.

This listing of claims will replace all prior versions, and listings, of claims in the above-captioned application.

Listing of Claims:

Claims 1-308 (cancelled)

309. (currently amended) A system for detecting an analyte in a bodily fluid comprising:

a light source;

a sensor array, the sensor array comprising a supporting member comprising at least one cavity formed within the supporting member;

a particle, the particle positioned within ~~the~~ a cavity, wherein the particle is ~~configured~~ adapted to produce a signal when the particle interacts with the analyte in the bodily fluid ~~during use~~, and wherein the particle comprises a receptor molecule coupled to a polymeric resin;

a fluid delivery system, the fluid delivery system being incorporated into the supporting member; and

a detector, the detector being configured to detect the signal produced by the interaction of the analyte with the particle ~~during use~~;

wherein the fluid delivery system is configured to a deliver fluid to the particle positioned within the cavity, and wherein the light source and detector are positioned such that light passes from the light source, to the particle, and onto the detector ~~during use~~.

Claims 310-459 (cancelled)

460. (currently amended) The system of claim 309, wherein the system is adapted to detect a plurality of analytes in a bodily fluid, wherein detecting a plurality of analytes in a bodily fluid comprises positioning a plurality of populations of particles ~~positioned~~ within a plurality of cavities, wherein at least one population of particles is adapted to detect at least one analyte, wherein the analyte that is detected by a population of particles is not detected by a different population of particles~~and wherein the system is configured to substantially simultaneously detect a plurality of analytes in the fluid~~.

461. (currently amended) The system of claim 309, wherein the system comprises a plurality of particles positioned within ~~the~~ a cavity.

462. (previously presented) The system of claim 309, wherein the light source comprises a light emitting diode.

463. (previously presented) The system of claim 309, wherein the light source comprises a red light source, a green light source and a blue light source.

464. (currently amended) The system of claim 309, wherein the detector is configured to detect ~~indepdently~~ independently the absorbance of red light by the particle, and wherein the detector is configured to detect the absorbance of green light by the particle, and wherein the detector is configured to detect the absorbance of blue light by the particle.

465. (previously presented) The system of claim 309, wherein the light source comprises a white light source.

466. (previously presented) The system of claim 309, further comprising a cover layer, wherein the cover layer is removable.

467. (currently amended) The system of claim 309, further comprising a cover layer positioned ~~at a fixed distance~~ above the supporting member at a height ~~to~~ that substantially ~~inhibit dislodgement of a particle in a cavity during use~~reduces the likelihood that a particle positioned within a cavity is dislodged from the cavity.

468. (currently amended) The system of claim 309, wherein ~~the~~ one or more ~~cavity~~ cavities ~~is~~ are configured to allow fluid to pass through the supporting member ~~during use~~.

469. (currently amended) The system of claim 309, wherein ~~the~~ one or more ~~cavity~~ cavities ~~is~~ are configured to allow fluid to pass through the supporting member ~~during use~~, and wherein a width of a bottom portion of one or more cavities ~~the cavity~~ is ~~substantially~~ less than a width of a top portion of the ~~cavity~~cavities, and wherein the width of the bottom portion of one or more cavities are ~~the cavity~~ is ~~substantially~~ less than a width of the particle.

470. (previously presented) The system of claim 309, further comprising channels in the supporting member, wherein the channels are configured to allow the fluid to flow through the channels into and away from the cavity.

471. (currently amended) The system of claim 309, further comprises a cover layer positioned over the cavity, wherein the cover layer is configured to inhibit dislodgment of the particle ~~during use~~, and wherein the cover layer is positioned such that a channel is formed between an upper surface of the supporting member and the cover layer such that the fluid passes through the channel ~~during use~~.

472. (previously presented) The system of claim 309, further comprising a sensing cavity formed on a bottom surface of the sensor array.

473. (previously presented) The system of claim 309, wherein the supporting member comprises a plastic material.

474. (previously presented) The system of claim 309, wherein the supporting member comprises a silicon wafer.

475. (previously presented) The system of claim 309, wherein the supporting member comprises a dry film photoresist material.

476. (previously presented) The system of claim 309, wherein the supporting member comprises a plurality of layers of a dry film photoresist material.

477. (previously presented) The system of claim 309, wherein an inner surface of the cavity is coated with a reflective material.

478. (previously presented) The system of claim 309, wherein the detector comprises a charge-coupled device.

479. (previously presented) The system of claim 309, wherein the detector comprises a semiconductor based photodetector, and wherein the detector is coupled to the sensor array.

480. (previously presented) The system of claim 309, wherein the detector comprises an ultraviolet detector.

481. (previously presented) The system of claim 309, wherein the detector comprises a fluorescence detector.

482. (canceled)

483. (currently amended) The system of claim 309, ~~wherein the particle comprises a receptor molecule coupled to a polymeric resin, and~~ wherein the polymeric resin comprises polystyrene-polyethylene glycol-divinyl benzene.

484. (currently amended) The system of claim 309, ~~wherein the particle comprises a receptor molecule coupled to a polymeric resin, and~~ wherein the particle further comprises a first indicator and a second indicator, the first and second indicators being coupled to the receptor, wherein an interaction of the receptor with the analyte causes the first and second indicators to interact such that the signal is produced.

485. (currently amended) The system of claim 309, ~~wherein the particle comprises a receptor molecule coupled to a polymeric resin, and~~ wherein the particle further comprises an indicator, wherein the indicator is associated with the receptor such that in the presence of the analyte the indicator is displaced from the receptor to produce the signal.

486. (Cancelled)

487. (Cancelled)

488. (Cancelled)

489. (previously presented) The system of claim 309, further comprising a filter, wherein the system is configured such that the fluid passes through a filter prior to passing over the sensor array.

490. (previously presented) The system of claim 309, further comprising a reagent reservoir, wherein the system is configured such that fluid passes through a reagent reservoir prior to passing over the sensor array.

491. (previously presented) The system of claim 309, wherein the particle ranges from about 0.05 microns to about 500 microns.

492. (previously presented) The system of claim 309, wherein a volume of the particle changes when contacted with the fluid.

493. (previously presented) The system of claim 309, wherein the signal is a spectroscopic change, and wherein the detector is configured to measure the intensity of the

spectroscopic change.

494. (previously presented) The system of claim 309, wherein the sensor array further comprises a vacuum chamber coupled to a conduit and the sensor array, and wherein the chamber is configured to provide a pulling force on the fluid in the sensor array.

495. (Cancelled)

496. (previously presented) The system of claim 309, wherein the particle comprises a polymeric resin, a biopolymer coupled to the polymeric resin, and wherein the biopolymer undergoes a chemical reaction in the presence of the analyte to produce a signal.